



## FINANCING POWER IN THE PUBLIC INTEREST

In July 1997, TVA unveiled its ambitious 10-Year Business Plan that will strengthen us financially, position our electric power operations to meet the competitive challenges of a restructured marketplace, promote economic development and deliver great value to our customers.

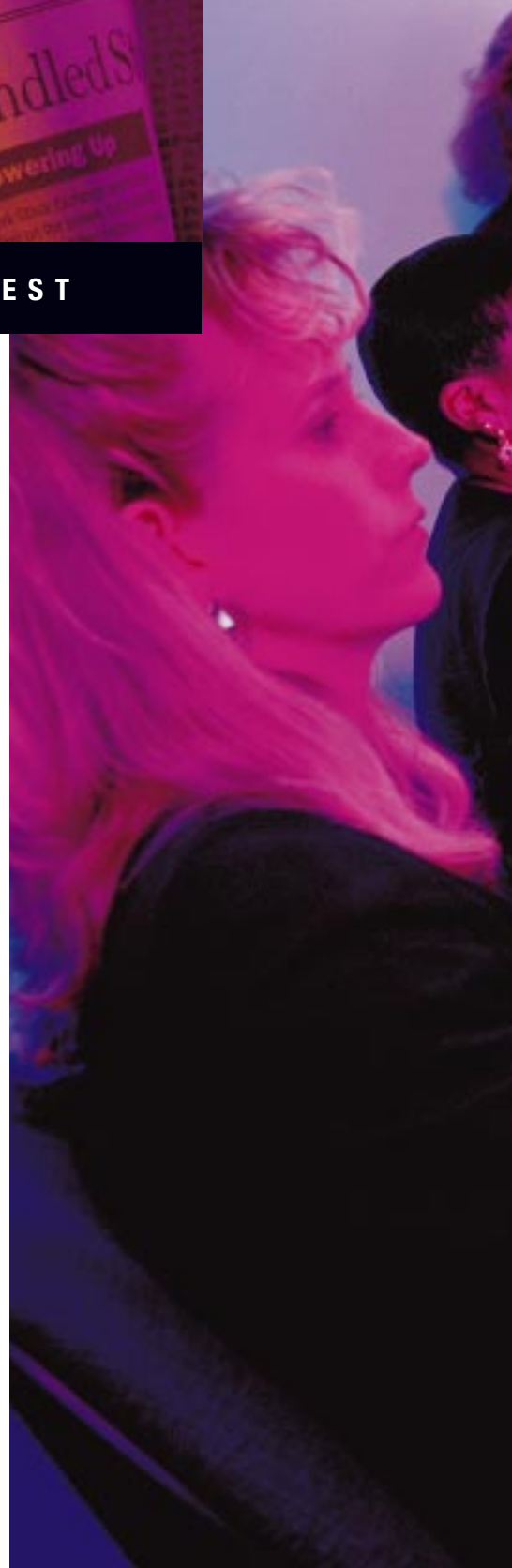
This plan sets a focused course for TVA to reduce its debt by 50 percent, to \$13.8 billion by 2007, thus enabling us to reduce the total cost of power to the Valley by 15 percent thereafter. The plan emphasizes how a strong, competitive TVA benefits its stakeholders and the entire Tennessee Valley. In addition to creating more financial flexibility for TVA, it promises more flexibility for 160 distributor customers, allowing them to change their power contracts from a rolling 10-year term to a rolling five-year term after five years.

### 10 - YEAR PLAN

In developing the plan, we thoroughly examined all areas of our current cost structure. After reducing our costs wherever possible, TVA implemented the Valley's first price increase in 10 years, following a decade during which the cost of living increased about 38 percent.

This price change will produce a 5.5 percent increase in TVA's firm power revenues in 1998, or about \$345 million, with every dollar of increased revenue targeted to reduce TVA's debt and boost our competitive position. The price increase, lower capital expenditures, and improved operational efficiencies will help TVA achieve its aggressive debt-reduction target.

A key feature of the plan is continued support for economic development. The 10-Year Business Plan includes incentives that will contribute to the Valley's economic base. Because of the importance of manufacturing





David H. Smith  
Chief Financial Officer

Ed Christenbury  
General Counsel

TVA'S 10-YEAR BUSINESS PLAN IS ESSENTIAL TO FULFILLING OUR MANDATE TO PROVIDE POWER AT THE LOWEST FEASIBLE PRICE TO PROMOTE THE ECONOMIC DEVELOPMENT OF THE REGION.



TVA's Treasury Staff  
tracks fluctuations in  
the bond market.





## TVA'S POWER IS SELF-SUPPORTING

The TVA power system is not subsidized by federal dollars. While TVA is a wholly owned U.S. Government corporation, our power-related activities are entirely self-supporting—and have been since 1959. TVA pays all its costs with its own electric power revenues. A recent report published by the General Accounting Office, the auditor for the U.S. Congress, confirmed that TVA's power program costs the taxpayer nothing.

In fact, TVA has paid the U.S. Government—its owner—an uninterrupted cash return since 1959 at a market rate of interest on the government's initial power program appropriation. TVA has paid the U.S. Government more than \$3 billion in principal and interest on the government's original investment of \$1.4 billion.

TVA is different from a private power company. TVA is government-owned and was created in 1933 to serve a public purpose—to strengthen the regional economy by supplying low-cost power to even the most remote parts of the Tennessee Valley. In addition to operating the power system, TVA historically has received congressional appropriations to provide some congressionally mandated non-power functions. These include stewardship of land and water resources of the region, activities routinely performed by government entities and paid for by appropriations throughout the nation. These funds are entirely separate from TVA's power system funds.

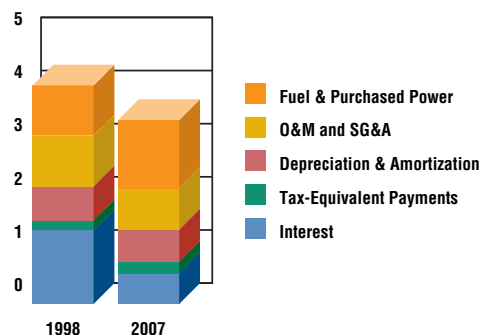
jobs in the region, TVA is expanding its Large Manufacturing Credit program, which is offered to qualifying manufacturing industries with loads greater than 5,000 kilowatts. Industries in the program, which currently receive a 5 percent monthly credit on their firm power bills, will receive an additional credit to mitigate next year's price increase. The new credit will also be available to distributors of TVA power for their qualifying industrial customers with loads greater than 1,000 kilowatts.

Programs like these support TVA's fundamental mission of economic development in the Tennessee Valley region. By providing competitively priced electricity, TVA helps power the economy, producing quality jobs.

TVA's 10-Year Business Plan is designed to accomplish long-term objectives that will enable us to thrive in the coming restructured marketplace by:

- Reducing our cost of power to match the lower market prices anticipated in a more competitive market.
- Altering TVA's cost structure from a rigid, high fixed-to-variable cost relationship to a more flexible structure better suited to a volatile, competitive market.

Average Cost of Power (cents per kWh)



TVA plans to reduce its cost of power from 4.1 cents per kWh in 1998 to 3.5 cents by 2007.

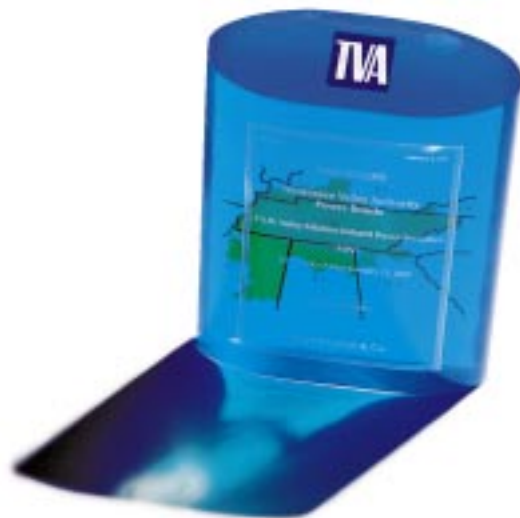


■ TVA is required by the TVA Act to sell power at the lowest feasible rates. We are able to sell power through our distributors at the highly competitive average residential price of 5.9 cents per kilowatt-hour because of our dedication to continuously reducing costs and improving efficiencies.

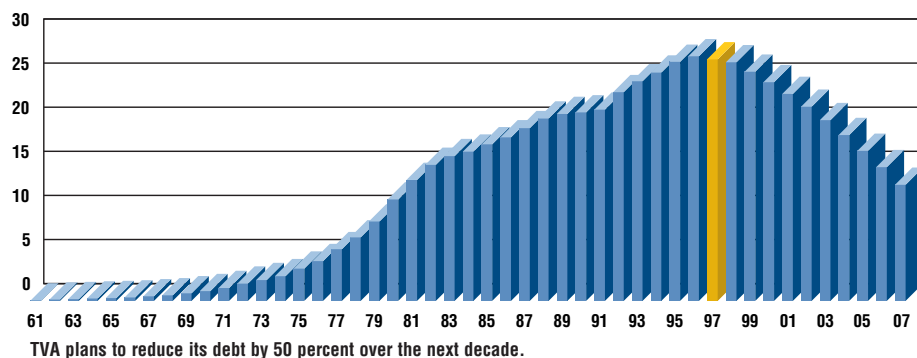
■ TVA pays 5 percent of its power sales revenues each year in tax-equivalent payments. In 1997, these payments totaled a record \$272 million, an increase of \$16 million over 1996. Combined with taxes paid by local distributors of TVA power, these payments are comparable to state and local taxes, excluding income taxes, of neighboring for-profit utilities.

■ Safety at an attractive yield is the primary reason that more than 250,000 individuals and institutions across the United States own TVA bonds. Key strengths of TVA's power bonds include an exclusive first pledge of payment from TVA's net power proceeds and the statutory requirement to charge rates sufficient to ensure full payment of annual debt service.

■ The TVA Investment Challenge is a unique partnership with the region's public universities that offers students a real-world learning experience in financial investment management. TVA will allocate approximately \$2 million of its \$550 million Nuclear Decommissioning Trust Fund to 19 universities. Under the guidance of faculty members, students will design a long-term management strategy, actively manage the funds, and periodically provide performance reports to TVA. Each year TVA will recognize the three universities whose student-managed portfolios generate the best returns.



TVA Debt (billions of dollars)



## PREPARED TO COMPETE

■ Strengthening customer allegiance and satisfaction by developing opportunities for mutual support and partnerships.

These actions will help secure TVA's role as a leader in the marketplace. They ensure that customers will continue to have a source of competitively priced power, that TVA's operations will be financially secure, that TVA bonds will continue to attract investors, and that employees will have continuing opportunities for professional growth and development.

Industry restructuring will make the marketplace more dynamic and give customers more choice. The TVA Board developed its financial and operating strategy in anticipation of the restructured marketplace. The 10-Year Business Plan outlines the Board's strategy, provides a blueprint to prepare us for this environment and ensures that we can meet all our obligations in serving the public interest. ■



Sequoyah Nuclear Plant

## PROVIDING POWER IN THE PUBLIC INTEREST

In the Tennessee Valley, each time you reach for a light switch, boot up a computer, wake to the buzz of an alarm clock, listen to a baby monitor, play a video game or plug in a vacuum, you rely on the unspoken compact we have with our customers—that TVA will be there, providing reliable, efficient low-cost electric power.

TVA's excellent record of performance, productivity and reliability, earned over 64 years, is among its greatest assets. This performance was never more evident than in 1997, when TVA achieved record levels of operational excellence from all three of our power sources—fossil, nuclear and hydro—as well as in transmission, resource management and corporate operations. The men and women of TVA have done an outstanding job of reducing costs and improving productivity.

TVA's power system is in its best shape in decades, and we are working to prepare for the new power needs and challenges of tomorrow. We have improved the capacity factor of the fossil system by more than 20 percent during the past 10 years. We are continuing a long-term modernization and upgrading of all our hydro units, which has resulted in more efficient power production.

In TVA's nuclear program, five units are in operation, all performing at high levels of efficiency. In May, Watts Bar Nuclear Plant Unit 1 completed its first full year of operation with outstanding results. It operated through its first cycle at a capacity factor of 84.2 percent—well above the industry average of 65 percent for first-year plants—and generated 8.6 billion kilowatt-hours, enough to supply a city of more than 350,000 people.

## PERFORMANCE



TVA is known for producing low-cost power and offering customers some of the nation's best power performance. In January 1997, TVA met an all-time peak demand of 26,670 megawatts and in July met a summer peak demand of 26,661 megawatts.





**Joe Dickey**  
Chief Operating Officer

**Oliver Kingsley**  
1997 Chief Nuclear Officer

**Ike Zeringue**  
1998 Chief Nuclear Officer

**TVA PERFORMS AT HIGH LEVELS OF EFFICIENCY BECAUSE WE HELP SET STANDARDS FOR EXCELLENCE AND PRICE THAT THE ENTIRE ELECTRICITY INDUSTRY MUST WORK TO MATCH.**



**TVA has 17,000 miles of transmission lines across its seven-state region.**

# RECORD LEVELS OF EFFICIENCY



Ongoing upgrades and modernization of TVA's hydroelectric units have increased productivity and lowered unplanned outages. Pictured here, welding work at Norris Dam.

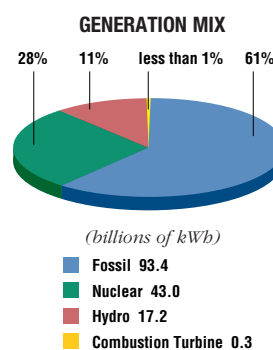
## PERFORMANCE IN 1997 INCLUDED THESE HIGHLIGHTS:

- The three nuclear plants—Sequoyah, Browns Ferry and Watts Bar—were ranked 13th, 14th, and 15th best in the nation in total production cost for 1996 by *Nucleonics Week* magazine.
- *Electric Light & Power* magazine ranked TVA as the second-lowest cost power producer among the nation's 50 largest utilities.
- *Electric Light & Power* also ranked Bull Run Fossil Plant No. 4 among the country's steam plants in heat rates. Gallatin and John Sevier Fossil plants also made the Top 20—at Nos. 17 and 18, respectively.
- Johnsonville Fossil Plant Unit 3 set a national continuous-operation record for fossil plants on June 3, with 616 consecutive days.
- Cumberland Fossil Plant set a TVA fossil plant one-year generation record of 18.5 million megawatt-hours.
- Raccoon Mountain Pumped-Storage Plant generated a record 2.6 million megawatt-hours.
- A Browns Ferry Nuclear Plant employee team took top honors in the government category for the Rochester Institute of Technology/USA Today Quality Cup competition. The team developed a system that uses computers to file, retrieve and update procedures, saving millions of dollars each year.
- TVA built a state-of-the-art power transmission substation in northeast Mississippi. The 500,000-volt substation will help power long-term economic growth in the region.

TVA's Sequoyah, Browns Ferry and Watts Bar nuclear plants ranked among the 20 best of the country's 110 nuclear plants in the key performance areas of reliability and generation. Browns Ferry employees set a world refueling record in March for General Electric boiling-water reactors, completing the refueling of Browns Ferry Unit 3 with an outage of only 19 days and 39 minutes.

Throughout 1997, TVA continued to deliver for customers. In January, TVA met an all-time power demand, demonstrating the ability of TVA's power system to meet customer needs. This summer, TVA met six record summer-demand peaks in five weeks, again proving its reliability during periods of high demand. TVA's nuclear plants closed the year with nuclear power generation up 19 percent, production mill rate down by 4 percent, and capital spending down by 51 percent. The consistently good performance at Browns Ferry made it the nation's lowest non-fuel-production-cost boiling-water reactor plant for 1997.

The TVA transmission system continues to set records for reliability. In "load not served"—the key reliability indicator, measuring the minutes per year that an average consumer experienced an outage due to TVA transmission system problems—TVA improved from 9.04 minutes in







1996 to 6.7 minutes in 1997. In anticipation of more severe weather in the coming year, the goal for “load not served” duration is 8.6 minutes in 1998.

Though we have reduced our employment level to about 14,500 from 34,000 during the past 10 years, TVA employees have risen to the challenge of attaining higher levels of power system productivity and reliability. ■

Colbert Steam Plant





A TVA economic development loan helped Alliance Engines of Maryville, Tennessee, through a critical period of its growth.

## MEETING THE VALLEY'S NEED FOR POWER

**Success in the power business is about generating low-cost, reliable power and finding new ways to meet customer needs.** TVA excels in those areas.

TVA's primary customers are local power companies that distribute electricity to residential, commercial and industrial end-users; others are directly served industries and federal agencies with special power needs. TVA's customers serve the Tennessee Valley's homeowners, businesses, manufacturers, schools and governments.

In 1997, we supplied 140 billion kilowatt-hours, with power distributors accounting for about 82 percent of that consumption. Directly served industries used 13 percent and federal agencies used the remaining 5 percent.

### RELIABILITY

Through a combination of leading-edge technology, financially and operationally flexible contracts, and creative marketing, TVA has introduced and implemented programs that are helping the power distributors, the industries and the communities of the Tennessee Valley.

Several programs implemented in 1997 are helping our customers put their power to work. For example, TVA offered distributors increased flexibility through power-contract amendments that would, beginning five years after the amendment, change the contract from a rolling 10-year term to a rolling five-year term.

By working in partnership with our customers, TVA is making a difference in people's lives. The following are just a few examples:

Through its support and funding of business incubators, TVA has played a key role in helping communities and local power distributors launch small businesses. These locally sponsored multi-tenant facilities help new businesses, industries and first-phase business expansions

### HOME IMPROVEMENTS TO SAVE ENERGY

Families in Tennessee, Alabama and

Mississippi are getting the opportunity to live

more comfortably and more affordably through a pilot energy-saving program developed by TVA and state human-service organizations.

The one-year pilot program, called the "Energy Efficiency Home



Improvement Project," will help customers lower their electric bills through weatherization and the installation of energy-saving devices in homes that use electricity as a primary heating source.

This is one of several energy-management programs recommended in TVA's Energy Vision 2020, TVA's integrated plan for ensuring adequate, reliable, affordable and sustainable power to the people of the Tennessee Valley into the next century.

The Energy Vision 2020 plan set a target of developing residential energy-saving programs that will result in a power-generation savings of 2,200 megawatts by the year 2010—the power required by about 350,000 homes.





Bill Museler  
Executive Vice President  
Transmission/Power Supply  
Group



Mark Medford  
Executive Vice President  
Customer Service &  
Marketing Group

TODAY, THE COMMUNITY NATURE OF PUBLIC POWER COMPANIES IS REFLECTED IN THEIR QUICK AND CONSTANT RESPONSIVENESS TO CUSTOMER NEEDS, INCLUDING CUSTOMER SERVICE AND RELIABILITY.

The Maytag Cooking Products Plant in Cleveland, Tennessee, depends on TVA and Cleveland Utilities for reliable power at competitive prices.



## CUSTOMER SERVICE



### AVERAGE RESIDENTIAL UTILITY RATES

(cents per kWh)



become established by allowing them to share services, equipment and space. Since its inception in 1988, the program has helped launch 550 businesses, and its current clients and graduate companies have created 3,800 jobs, generating more than \$300 million in revenues.

The Chattanooga/Hamilton County Business Development Center recently received the 1997 Incubator of the Year Award in the Manufacturing/Service category from the National Business Incubator Association.

TVA is also investing in small-business development across the Tennessee Valley region through loan funds to help businesses start up and expand. One new loan fund provides short-term working capital for new and existing businesses in the 15 TVA-assisted business incubators throughout the region.

Power distributors serving school districts in Kentucky and Tennessee are helping schools save money on their heating and cooling costs through geothermal heat pumps, which use the earth's temperature to heat and cool buildings. Sumner County, Tennessee, has committed to installing geothermal heat pumps in five schools it will build in the next two years. This will save Sumner County about \$75,000 in operating expenses over six years; 19 other counties are following Sumner County's lead.

TVA's *energy right* program was developed jointly by TVA and its cus-

### TVA EFFORTS "REFLECT" BIG SAVINGS

At a public TVA Board meeting, David Purvis made it very clear exactly how he feels about TVA. He's the Plant Manager at Stanley Decor, a Tupelo, Mississippi, glass manufacturer owned by The Stanley Works of New Britain, Connecticut.

Purvis told about a phone call he received several months before from Tupelo Water & Light, a Mississippi distributor of TVA electricity. TW&L supplies electricity to Purvis' company, which produces about 350,000 square feet of mirrored glass each day—and uses a lot of electricity in the process. The problem, the caller told Purvis, was that Stanley Decor seemed to be using more power than it should need.

TVA inspectors checked Stanley's equipment for power leaks. Nothing. But when they checked the metering equipment, they found plenty of problems—and plenty of savings for Stanley. The result: an \$86,000 rebate and annual savings of \$28,000.

But TVA wasn't finished. It sent in a consultant who discovered a way for Stanley to reduce its level of scrap and broken glass—which will save an additional \$96,000 annually. Then TVA showed Stanley how to recycle its wastewater—saving \$24,000 a year. Altogether, TVA found annual savings of nearly \$150,000 for Purvis' plant.

"You don't find many suppliers who help you uncover ways to use less of their product," says Purvis. "By helping their customers, TVA will keep customers in the long run."



**CARING CLEANUP:** When an unforgiving tornado touched down in East Brainerd, Tennessee, in March, a large group of TVA employees volunteered their help to those whose homes and lives were devastated by the storm. More than 100 TVA volunteers devoted several weekends and evenings to cleaning up the yards and repairing damage to homes of elderly individuals and those with physical limitations.



Through its *energy right* program, TVA has helped the Middle Tennessee Electric Membership Corporation increase its energy-market share by promoting energy-efficient programs to its customers. This is a significant “assist,” because this distributor operates in an area where natural gas is available in 80 percent of the home-heating market.

## MEETING NEEDS

tomers in the Tennessee Valley Public Power Association to promote more efficient power use. Through this program TVA and distributors are addressing the public’s energy-conservation concerns by making sure their homes use energy efficiently—for example, by installing energy-saving heat pumps. This saves homeowners money on their energy bills. Plateau Electric Cooperative of Oneida, Tennessee, has taken the program a step further, building a model home according to *energy right* standards as a way to educate contractors and homeowners about energy efficiency.

TVA continually seeks new ways to nurture a culture focused on serving our customers. A company-wide initiative begun in 1997, “STAR 7,” is improving how TVA employees work together to meet customer needs. “STAR” stands for Strategic Teamwork for Action and Results. The “7” represents our seven values—integrity, respect for the individual, teamwork, innovation and continuous improvement, honest communications, leadership and flexibility. STAR 7 supports a high-performance culture that challenges everyone at TVA to find better ways to do business in a more competitive marketplace. ■





Norris Lake

## SERVING THE PUBLIC INTEREST

**Although the electric utility industry is changing, some things remain the same. One** of those constants is public power's commitment to the common good. TVA's customers include 50 rural cooperatives and 110 municipal electrical systems. Through these distributors, some 8 million people over 80,000 square miles rely on electricity produced by TVA.

In the years ahead, public power should serve as a model for the electric utility industry by holding to the core values that make public power a vital partner in regional and community development. Any comprehensive restructuring legislation must protect the interests of all industry participants, and the public interest is first on the list. Historically, public power developed because investor-owned utilities were reluctant to serve the less profitable, more remote areas of the nation.

Today, public power serves some 35 million electricity customers in the United States—14 percent of all U.S. customers. Electricity is an essential service, and the benefits of any comprehensive restructuring must include all classes of customers. Public power is ideally suited to be an advocate for the fundamental public interest in electricity generation, transmission and distribution.

TVA's fundamental mission is that of service to the public. Across the nation, residential customers of public power companies pay an average of 6.7 cents per kilowatt-hour for their electricity, compared with 8.9 cents for power from privately owned utilities. TVA believes in public power and its continuing importance to our nation's energy future. Together, public power and investor-owned utilities can form a robust competitive marketplace. ■

## COMMON GOOD

## HIGHLIGHTS

- TVA is a national model for successful watershed management. TVA's Clean Water Initiative for 1997 included expanding efforts to all 12 of the region's sub-watersheds. During 1997, TVA conducted 66 pollution-reduction projects, which resulted in improved water ratings on 15 percent of the Tennessee River watershed.
- Through a demonstration project at the Milan Army Ammunition Plant in West Tennessee, scientists from TVA's Environmental Research Center (ERC) are proving that constructed wetlands can successfully clean up toxic chemicals. This demonstration can be transferred to the Army's other contaminated sites throughout the nation. The ERC is continuing its transition to self-sufficiency. This year 66 percent of its total payroll was funded from sources other than TVA appropriations, up from 48 percent last year.
- Internationally, TVA continued its work with the People's Republic of China. The Chinese want to follow the TVA model as they develop their water resources, create a national power grid and expand their current generating capacity. We are also serving as advisors to India and other nations around the world, as developing countries strive to improve their citizens' quality of life by following TVA's example.
- As part of its corporate citizenship efforts, TVA and TVA employees support 82 Valley public schools through TVA's "Partners In Education" program, through which TVA offices or departments "adopt" local schools. Students across the region—from inner-city areas to farmlands—benefit from TVA's support and employees' volunteer efforts.
- In an effort to develop an alternative wastewater system for rural areas in which industrial, commercial and residential growth might be slowed by insufficient sewer capacity, TVA initiated a wastewater pilot program in North Alabama, using a "bog garden" to serve homes in the area. Through the teamwork of our Technology Advancements and Marketing groups, this innovative program will help support growth in rural communities.

THE GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRICITY IS OF GREATER IMPORTANCE TO MODERN LIVING THAN ANY OTHER PUBLIC SERVICE.

**PARTNERS IN POWER**—Through the Public Power Alliance, TVA and 17 other public power companies are working together for greater leverage and a stronger competitive position. Formed last year, the alliance fosters cooperation among public generation and transmission electric utilities to provide better, lower-cost services to their customers in the restructured energy marketplace of the future. Alliance members will be exploring joint marketing and brokering of electricity, energy services, mutual assistance in emergencies, and sharing of utility industry information.



Kate Vogel, a glass artist in Bakersfield, North Carolina, is one of many regional crafts entrepreneurs whose businesses were nurtured by the organization HandMade in America and a TVA economic development loan.





Sequoyah Nuclear Plant grounds



### THE COMMON GOOD

TVA's goal is not only to continue to be a leader in the generation of electricity but also to continue our long tradition of being a good neighbor in the communities we serve. Public power originated in communities seeking local control and universal access to essential electric service, and TVA's roots grew from the need to provide quality service to all citizens of our region.

Today, the nature of public power is reflected in its responsiveness to customer needs, and public power is uniquely well-suited to ensuring that the electric utility industry meets fundamental public needs for reliability of service, environmental stewardship, universal access for all consumers, including those in thinly populated rural areas, and economic development of our service area. TVA is a power company ready for the challenges of restructuring and committed to serving the public interest.







THE FUTURE OF PUBLIC POWER IS CENTRAL TO THE RESTRUCTURING DEBATE. PUBLIC POWER COMPANIES WERE FOUNDED BY COMMUNITIES SEEKING LOCAL CONTROL AND UNIVERSAL ACCESS TO ESSENTIAL ELECTRIC SERVICE.



#### RELIABILITY

Today's increasing power demands and high-tech industries mean that reliability, as well as price, is a top priority with customers. Long recognized for providing competitively priced electricity, TVA uses a broad mix of fossil, nuclear and hydro units to ensure the reliability of its power system.

TVA blends efficiency and expertise at every step in generating, buying, selling and transmitting power to customers. TVA's transmission system covers an area of 80,000 square miles, with 17,000 miles of transmission lines. The system is designed and built to be reliable under the most severe contingencies. We are proud of our history of system reliability and intend to meet whatever demands are made on our system in the future.

**TVA WEEKEND ACADEMY HAS CLASS:** Yes, school can be educational and fun. At least that's the lesson 52 Knoxville elementary students are learning during their twice-a-month participation in TVA's Weekend Academy. The "school" offers students real-life, hands-on learning adventures and activities that range from making electricity to experiencing a simulated space mission. The students meet on Saturdays in TVA University classrooms or on field trips throughout the Tennessee Valley. The year-round academy celebrated its first anniversary in May. According to Academy Coordinator Nan Scott, "This project is a positive step toward giving inner-city kids a better future, helping rebuild the downtown community and ensuring a future workforce."



The 1996 Olympics brought the world to a remote part of East Tennessee for whitewater racing. Today, TVA and others are working together to continue the economic success spurred by the Olympics. By offering more recreation opportunities in the region, TVA is helping to build on the reputation the Ocoee River gained during the Olympics.

Any industry restructuring plan

should ensure a commitment to:

- Reliability
- Universal Access
- Environmental Responsibility
- Economic Development



Norm Zigrossi  
Chief Administrative Officer



Kate Jackson  
Executive Vice President  
Resource Group

NATIONAL ASSET